

Quiz 3 – PHYS203

Name_____

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Lens Formula: $\frac{1}{f} = \frac{1}{d_i} + \frac{1}{d_o}$ The diopter is used to measure $\frac{1}{f}$ and is in m^{-1} .

Also remember that a focal length for a convex (converging) lens is positive, for a concave (diverging) lens is negative. A virtual image is negative, a real image is positive.

An optometrist prescribes contact lenses that have a resolving strength of +1.82 diopters.

(a) Are the lenses converging or diverging?

(b) Is the person who wears them nearsighted or farsighted?

(c) Where is the unaided near point of the person located, if the prescription is designed so that the objects no closer than .35 meters can be seen clearly?

(d) Draw a picture which includes the lens, the eye, an object at .35 meters, the virtual image outside the eye, the real image which appears on the retina.

